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27045	7590	09/02/2010	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			DONADO, FRANK E	
			ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/551,941  
Filing Date: September 14, 2006  
Appellant(s): TORSNER, JOHAN

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Roger S. Burleigh  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/14/10 appealing from the Office action mailed 12/8/09.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences.**

The Examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The Appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The Appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,901,063	VAYANOS, ET AL	3-2005
2002/0176362	YUN, ET AL	11-2002
7,330,439	PUUSKARI, ET AL	12-2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vayanos, et al (**US Patent No. 6,901,063**), in view of Yun, et al (**US PG Publication 2002/0176362**). From now on, Vayanos, et al, will be referred to as Vayanos, and Yun, et al, will be referred to as Yun.

Consider claim 1, Vayanos teaches a method of reducing impact of transmission errors by means of a retransmission protocol, utilizing a retransmission loop involving packet radio transmissions from user equipment to a control element connected to one or more radio base stations, **(User equipment (UE) 106 is in communication with Node B 104 in a UMTS system, where a retransmission of packets is occurring from the UE to the Node B, a controller 1330 is connected to Node B, and the base station and the UE are part of a UTRAN system that includes a Radio Network Controller, Column 32, lines 31-32, Column 33, lines 24-26 and 35-37, Column 4, lines 13-21 and 44-47 and Figure 13)**, wherein the user equipment radio transmissions are received at one or more radio base stations for forwarding to the control element **(The packet is received by the system controller 1330 at Node B, where the system controller serves as the control element in Figure 13, Column 33, lines 24-26 and 35-39)**, the base station acknowledging, positively or negatively, transmissions from the user equipment and the control element acknowledges, positively or negatively, transmissions forwarded to it **(Column 33, lines 35-41)**. Vayanos does not teach acknowledgment of base station transmissions from a control element. Yun teaches acknowledgment of base station transmissions from a control element within a Controller **(A Base Station Controller sends acknowledgment of base station transmissions from a control element within a Controller, Paragraphs 213 and 214)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Vayanos to use a Base Station acknowledgment in this manner for the benefit of added security.

Consider claim 2, Vayanos, in view of Yun, teaches the method according to claim 1. Vayanos further teaches for a process of retransmission, if same transmitted packet information content is received more than once, the received transmissions are combined **(Column 21, lines 5-14 and Figures 9A and 9B).**

Consider claim 3, Vayanos, in view of Yun, teaches the method according to claim 2. Vayanos further teaches successive received packet transmissions of the same information content are combined in the base station prior to determining whether or not the radio base station should acknowledge the transmitted information content **(Step 958 of Figure 9B occurs as a result of combining a packet retransmission with a prior transmission, during which an attempt is made to recover the packet, and a NAK/ACK signal is transmitted back to the transmitter, in this case a UE, depending on whether or not the packet was recovered, Column 21, lines 10-13 and 39-51).**

Consider claims 4 and 5, Vayanos, in view of Yun, teaches the method according to claim 2. Vayanos further teaches whether or not the packet information content is the same is determined by means of a new data indicator, and the new data indicator, accompanying packet information, is transmitted on a reliable control channel **(A separate new data indicator variable is maintained for each HARQ channel that is used to indicate whether or not a packet retransmission has occurred, Column 19, lines 24-26 and Column 20, lines 46-56).**

Consider claims 6 and 7, Vayanos, in view of Yun, teaches the method according to claim 2. Vayanos further teaches the process is identified by means of a process identity, and the process identity, accompanying packet information, is transmitted on a reliable control channel **(After a retransmission process is discovered, step 930 in Figure 9, the process returns to step 912 and subsequently 922, where a HARQ Process ID (HID) field is transmitted as part of a control message to indicate the channel being used in the current packet transmission, Column 20, lines 52-56 and 25-30).**

Consider claims 8 and 9, Vayanos, in view of Yun, teaches the method according to claim 1. Vayanos further teaches the control element reorders received packets, and the received packets are reordered into sequential order **(The controller 1330 in the Node B performs retransmission techniques that include re-ordering of recovered packets that had to be retransmitted, where the packet are reordered according to their transmission sequence numbers (TSN's), Column 2, lines 53-56, Column 33, lines 39-41, Column 21, lines 44-51 and Column 7, lines 37-42).**

Consider claim 11, Vayanos, in view of Yun, teaches the method according to claim 9. Vayanos further teaches the sequential order is determined from MAC sequence number **(The TSN is part of the MAC frame, Figure 3).**

Consider claim 12, Vayanos, in view of Yun, teaches the method according to

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claim 1. Vayanos further teaches the method reduces delay of uplink transmissions, the delay being associated with the retransmissions (**A "stall avoidance" scheme is implemented by detecting activity on the HARQ channels, which includes the uplink channel and is used to prevent delays arising from discovering missing packets during the packet reordering process and deciding whether or not to continue trying to recover the missing packets, Column 9, lines 5-9 and 13-20, Column 10, lines 43-45 and 66-67 and Column 33, lines 35-41).**

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vayanos, in view of Yun, and further in view of Puuskari (**US Patent No. 7,330,439**). From now on Puuskari, et al, will be referred to as Puuskari.

Consider claim 10, Vayanos, in view of Yun, teaches the method according to claim 9. Vayanos, in view of Yun, does not teach the sequential order is determined from RLC sequence number. Puuskari teaches the reordering of packets in sequential order based on RLC header information that contains RLC sequence number information (**Column 6, lines 21-45**). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Vayanos, in view of Yun, to reorder packets in sequential order based on the RLC sequence number for the benefit of transmission efficiency.

## **10) Response to Argument**

a) Regarding claims 1-9, 11 and 12:

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Appellant argues:

i) Yun fails to disclose a method characterized by the use of acknowledgements between the radio base station and user equipment, in addition to an acknowledgement mechanism by the control element. (Page 5, Section 1 of the Arguments in the Appeal Brief).

Examiner Answers:

Appellant acknowledges Yun teaches ACK and NAK signals that are managed by a Base Station Controller (BSC) and are clearly taught in Paragraphs 213 and 214 (Page 5, Section 1 of the Arguments in the Appeal Brief). Yun does not, as asserted by the Appellant, teach the use of acknowledgements between the radio base station and user equipment **in addition to** an acknowledgement mechanism by the control element. However, the Yun reference is used precisely for the purpose of combination with the Vayanos reference that teaches the base station acknowledgment.

Appellant argues:

ii) No basis is provided, discernible from the prior art, to simultaneously use such mechanisms, between a user equipment and a base station and the base station and the control element, in order to reduce uplink retransmission delays (Page 6, Section 1 of the Arguments in the Appeal Brief).



Examiner answers:

The claims do not state the acknowledgments had to be occurring at the same time.

Therefore, the acknowledgments of the base station and the base station controller are not simultaneous.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the Examiner in the Related Appeals and Interferences section of this Examiner's Answer.

**(12) Conclusion**

Therefore, in view of the above reasons and having addressed each of Appellant's arguments, it is believed that the rejections should be sustained.

Respectfully submitted,

/Frank Donado/

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